

# NORTHWOODS JOURNAL – OCTOBER 2022

*A Free Publication about Enjoying and Protecting Marinette County's Outdoor Life*

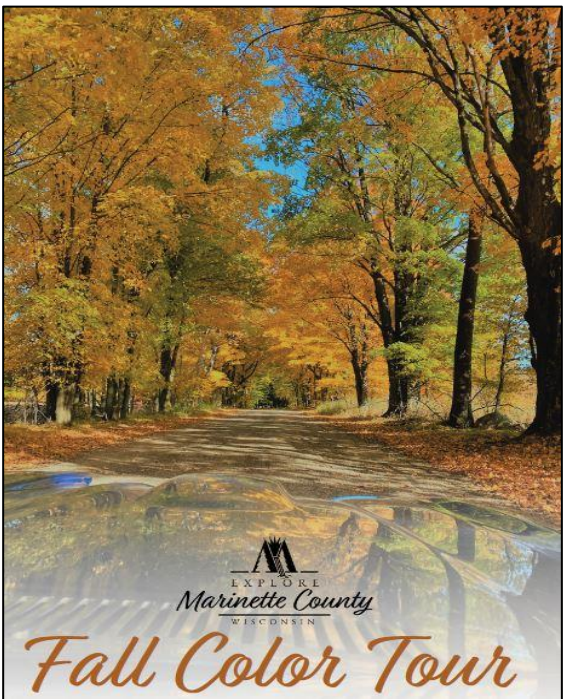
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## The Marinette County Fall Color Tour is Back!

September 23<sup>rd</sup> – October 31<sup>st</sup>

<https://www.therealnorth.com/pages/fall-colors/>



As the days get shorter and the nights turn cool, trees have begun their brilliant seasonal transformation to unique shades of red, yellow and orange. Wrap yourself in a blanket of fall hues as you explore Marinette County's canopied roadways and colorful trails!

### Wine, Cheese and Wildlife Route | Green Route | Coleman - Marinette

Follow the 70 miles southern Marinette County route to let your tastebuds abound with fall flavor! The Wine, Cheese and Wildlife Tour begins at US 141 and County M in Coleman, where guests can shop the Front Porch Market (Mon.– Sat.) for tasty Wisconsin cheese. Travel up to On a Whim in Crivitz to grab a bottle of wine to share with friends. Watch for wildlife in the hardwood lined fields and hike the Prairie Trail at Harmony Arboretum. Stop for wine at Forgotten Fire Winery and then drive the Green Bay shoreline to conclude the tour in the City of Marinette, which boasts a number of shopping and dining options.



### Everything Autumn Route | Yellow Route | Niagara

Experience All Things Autumn on this 28-mile route, beginning at Riverside Park in the city of Niagara. Savor the magical aroma of fall with a one-mile hike on the Riverside Trail system along the beautiful Menominee River. As the tour descends south, stop for pictures at the Niagara bluffs and the photo booth at Long Slide County Park. Hike the natural shore of the Pemebonwon River to see how many waterfalls and rapids you can find. Complete your autumn experience with a stop at Pleasant View Orchard for crisp apples and fresh bakery.

### Waterfall Route | Red Route | Amberg - Crivitz

Stops along this scenic 65-mile route provide visitors with the opportunity to hike trails, enjoy waterfalls up close and explore the autumn beauty awaiting in each park. The Waterfall Tour begins at Dave's Falls, just off Highway 141 near Amberg and leads travelers to more magnificent waterfalls and scenic parks. This route travels south along Rustic Road 32, which you'll find canopied with wonder. Don't forget to snap a picture at the photo booths you'll find stationed around these parks!

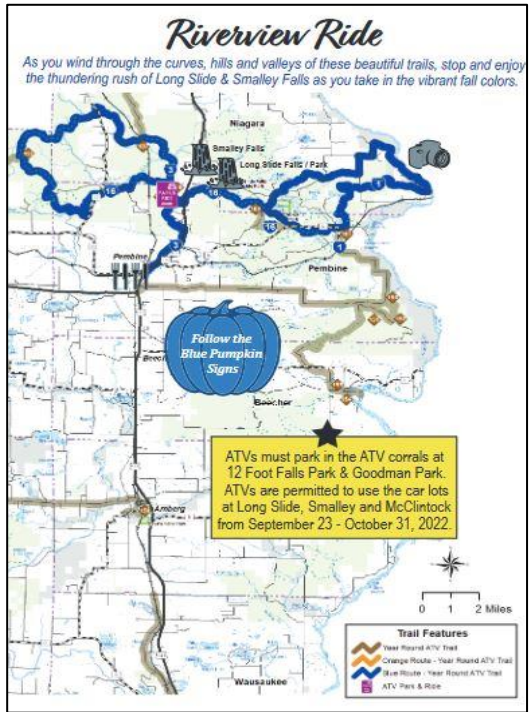
Route Maps will also be available at local businesses throughout Marinette County. [Mail Me a Map](#) or [Download the 2022 Fall Color Brochure](#).

Some routes involve Marinette County Parks which require a parking pass. You can purchase a day pass (\$5/vehicle - cash only) at any park or you can purchase a day pass or annual pass in advance by [clicking here](#). *Not all restaurants & retailers are open daily, check hours for availability.*

### ATV/UTV Routes:

**New in 2023, Explore Marinette County will be adding two fall color trail routes!**

Enjoy the twist and turns along bends of brilliant oranges and vibrant reds - these trail routes with take riders to various waterfalls and to picture worthy stops along the trails.



Join our mailing list to be sent a hard copy of 2023 Fall Colors Brochure when it's hot off the press! - Make sure to filling out your address information & add "2023 fall color explorer" in the comments - [Click Here](#) Find fall themed and other area events here: [Explore Marinette County Events](#).

For more information or to contact the Tourism office, call 715-732-7473 or [click here to email](#).





## Bats Are Nature's Superheroes - and Bat Week is Almost Here!

<https://www.nationalgeographic.com/animals/article/why-bats-are-the-real-superheroes-of-the-animal-world> & <https://batweek.org/>

Batman may not have any superpowers, but his inspiration certainly does. More than 1,400 bat species live around the world, except in Antarctica and a few remote islands. What makes these flying mammals so successful? Over their 50 million years of evolution, bats have developed ingenious solutions to life's challenges, from a built-in sonar system for finding prey to dexterous wings that create the fastest horizontal flight of any animal on Earth.

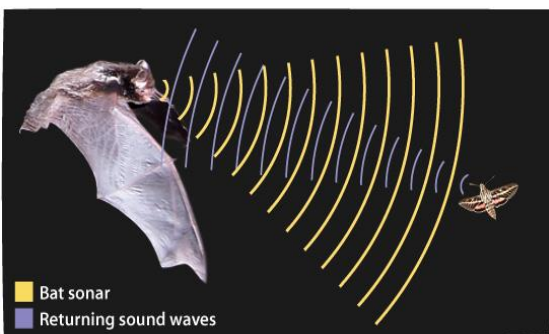


"There is still a lot to learn, but it is clear that bats really do have superpowers," says Rodrigo Medellín, an ecologist at the Institute of Ecology at the National Autonomous University of Mexico and a National Geographic Explorer. "Bats are showing us how to live a better life," for instance by serving as models for healthy living and longevity.

### Superpower #1: Echolocation

Despite the popular myth, bats aren't blind. But many of them do not rely on vision as their primary sense, instead use **echolocation** to navigate and find food in complete darkness.

Echolocation is a way of perceiving one's environment by bouncing high-frequency sounds off objects and listening for their echoes. From these echoes, bats can calculate the distance, size, and shape of objects, such as a tasty mosquito. This natural sonar is so sophisticated that some bats can detect an object as small as the width of a human hair or recognize differences in echo delays of less than a microsecond. "Echolocation is a flexible and versatile way of understanding the world," Medellín says.



Recent research also suggests that bats may be less reliant on echolocation than previously assumed. National Geographic Explorer and University of Colorado biologist Aaron Corcoran found that bats fly for extended periods of time in silence, seemingly to avoid being eavesdropped on by other bats. When not echolocating, bats may turn to vision and spatial memory to find their way.

### Superpower #2: Speedy flight

Bats are the only mammals that use their muscles to fly via so-called self-powered flight. This makes their flight techniques unique in the animal kingdom. Bat wings resemble modified human hands, with elongated "fingers" connected by a flexible skin membrane. The flexible wings, packed with blood vessels, nerves, and tendons, are supported by special muscles that make bats efficient and agile flyers.

Unlike bird or insect wings, bat wings can fold during flight in various ways, like the way that a human hand can close into different shapes.

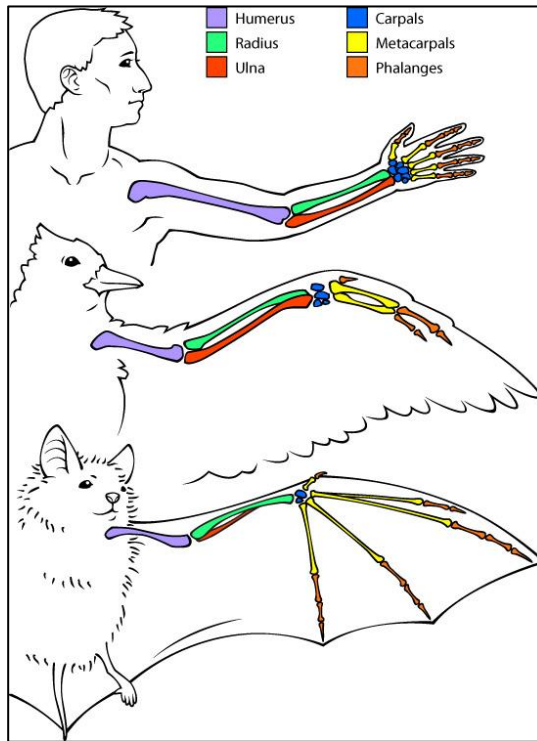


Image from <https://askabiologist.asu.edu/human-bird-and-bat-bone-comparison>

It may surprise some people to learn that "the fastest self-powered flight on Earth is the humble Mexican free-tailed bat," Medellín says. In 2016, researchers in southwestern Texas recorded Mexican free-tailed bats reaching speeds of up to a hundred miles per hour, easily making this 10-gram bat the fastest mammal on Earth. That's swifter than the peregrine falcon, which can reach speeds of around 200 miles per hour when diving. In horizontal flight, the bird only reaches speeds between 40 and 60 miles per hour. "The peregrine falcon is cheating," quips Medellín. "He uses gravity to accelerate."

### Superpower #3: Longevity

As a rule in biology, smaller animals have shorter life spans than larger ones. *But bats are rule breakers: they're the longest-lived mammals relative to their body size.* The oldest bat ever recorded was a tiny Brandt's bat in Russia, which weighed less than a quarter of an ounce, yet lived at least 41 years.

Recently, scientists looked inside bats' cells for the secrets to their exceptionally long lives. They focused on **telomeres**, protective structures found at the ends of chromosomes. In most animals, telomeres tend to get shorter with age - a process that may be associated with age-related cell breakdown and death. But the telomeres of the longest-lived group of bats, a genus called *Myotis*, do not appear to shrink with age. Understanding why bats live so long, and how they remain healthy into old age, may help extend human life spans one day.



The Brandt's bat above is one of smallest mammals with exceptional longevity

(<https://www.livescience.com/39013-bat-longevity-genes.html>).

### Superpower #4: Resistance to viruses

In addition to living longer, bats remain healthy

throughout their lives, with very low incidences of cancer. Furthermore, bats can be infected with otherwise deadly viruses, such as rabies and Ebola, without getting sick – so scientists are studying bat genetics, which has revealed some clues. A recent analysis of six bat species' genomes revealed a long-standing evolutionary arms race between bats and viruses. For instance, bat genes involved in immunity and inflammation periodically changed over time, likely in response to infection by viruses, which themselves evolved better ways to infect bats.

Bats are the suspected reservoir for several viruses that can infect humans, such as the Nipah virus, which is often fatal. While some experts suspect that SARS-CoV-2, the coronavirus responsible for the COVID-19 pandemic, originated in bats, others question whether bats are the direct culprits. In any case, wild bats carrying coronaviruses do not pose a threat to humans if left undisturbed, conservationists say. What's more, research into their unique immune systems may actually give insight into how people can live with viruses and not get sick.

### Superpower #5: Keeping environments healthy







Beyond their own abilities, bats also bolster many other parts of their ecosystems. *Three out of every four bat species eats insects*, and each night, any of these species can eat their body weight or more in insects. Many are pests that cause damage to important agricultural crops, such as cotton. *Scientists estimate that insect-eating bats may save U.S. farmers about \$23 billion per year by reducing crop damage and limiting the need for pesticides.*

Many bat species boost plant health and diversity: at least 549 plant species either are pollinated or dispersed by bats. Those include many popular food crops, including bananas, mangos, guavas, and cacao (the main ingredient in chocolate).



We can also thank bats for our cocktails. The lesser long-nosed bat, which ranges from Central America to the southwestern U.S., is critical for the pollination of the blue agave cactus, from which tequila is made. These same bats also pollinate the saguaro cactus, a well-known symbol of the Sonoran Desert. "Bats are unsung heroes of biodiversity," says Medellín. "They provide crucial services to ensure our food, clothes, and drinks. It's about time we appreciate them."

### Resources & more information about bats:

-  <https://www.batcon.org/> - Bat Conservation International organization
-  <https://dnr.wisconsin.gov/topic/WildlifeHabitat/Bats> - WI DNR
-  <https://wiatri.net/inventory/bats/aboutBats/pdf/batsOfWisc.pdf> - The Wisconsin Aquatic & Terrestrial Resources Inventory
-  <https://wiatri.net/inventory/bats/news/pdf/2022MayEchocator.pdf>
-  <https://mdc.mo.gov/magazines/xplor/2022-09/going-batty>
-  <https://www.nps.gov/subjects/bats/index.htm> - National Park Service

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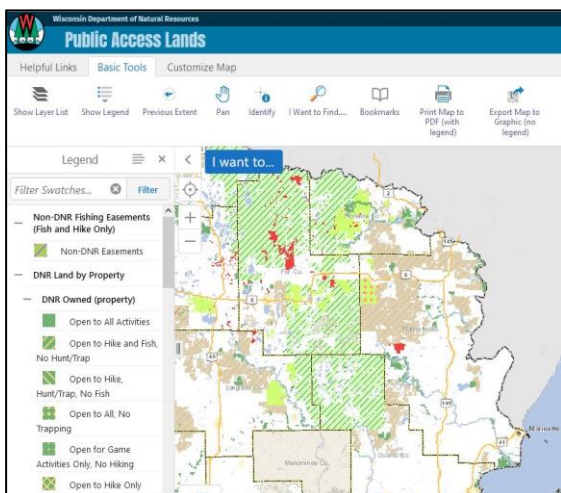
## Find Public Land to Hunt This Season Using DNR Online Mapping Tools

<https://dnr.wisconsin.gov/topic/lands>



The Wisconsin Department of Natural Resources (DNR) encourages the public to hunt on public land this hunting season. With millions of acres of public land available across the state, finding the perfect spot is easy using the DNR's array of online public land mapping tools.

From the Chequamegon-Nicolet National Forest in the north to the prairies of the wildlife areas in the south and everything in between – Wisconsin hunters have some of the best public land access east of the Mississippi River. Hunters can find new lands to explore, read up on regulations and season dates, and begin to plan their next hunting adventure from the comfort of home using [the DNR's Public Access Lands webpage](#).



Once hunters have done their preliminary scouting online, the next step is to get boots on the ground to explore the habitat and game signs in-person before the hunt. "Public lands hold amazing opportunities but hunting public land can come with obstacles if you don't scout in advance," said Jeff Pritzl, DNR Deer Specialist. "The adventure is rewarding for the same reasons that it is difficult."



The DNR reminds anyone hunting on public lands to be respectful of other recreators and DNR staff who may be actively managing the

properties during hunting seasons. Hunters should have backup plans to keep them afield in the event they overlap with another hunter. Hunters should also always be aware of their surroundings and watch for others. Check out the following DNR online public land mapping tools for your next hunt:

- [Hunt Wild mobile app](#) – The Hunt Wild mobile application has everything hunters need to find new public lands to explore, brush up on the regulations or locate a CWD sampling station.
- [Fields and Forest Lands Interactive Game Bird Hunting Tool \(FFLIGHT\)](#) – Hunters can use this tool to locate young aspen and alder habitat, woodcock and ruffed grouse hunting areas, pheasant-stocked public hunting grounds and public-access dove fields.
- [Voluntary Public Access-Habitat Incentive Program \(VPA-HIP\) interactive map](#) – Funded by the U.S. Department of Agriculture, the VPA-HIP map provides landowners with financial incentives to open their properties year-round to public hunting access. Hunters should read the [guidelines for accessing VPA properties](#).
- [Map of lands enrolled in Managed Forest Law and Forest Crop Law](#) – This map is especially useful for scouting locations in the central and northern forests.
- [Public Access Lands Atlas](#) – The atlas includes all DNR properties and nearly all federal and county-owned lands. Hunters should contact landowners beforehand to verify hunting is allowed.



### 2022 Deer Season Dates

Archery And Crossbow\* – Sept. 17, 2022-Jan. 8, 2023

\*No bucks may be harvested during the antlerless-only hunts

Archery And Crossbow\* – Sept. 17, 2022-Jan. 31, 2023

\*[Metro Sub-units and counties with extended archery seasons](#)

Gun Hunt For Hunters With Disabilities – Oct. 1-9, 2022 - [Learn more here](#)

Youth Deer Hunt – Oct. 8-9, 2022

Gun Deer Hunt – Nov. 19-27, 2022

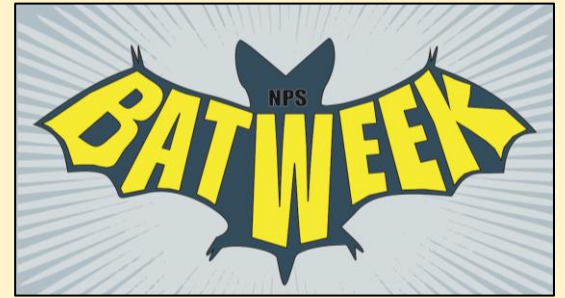
Muzzleloader – Nov. 28-Dec. 7, 2022

Statewide Antlerless Hunt – Dec. 8-11, 2022

Antlerless-Only Holiday Hunt\* – Dec. 24, 2022-Jan. 1, 2023

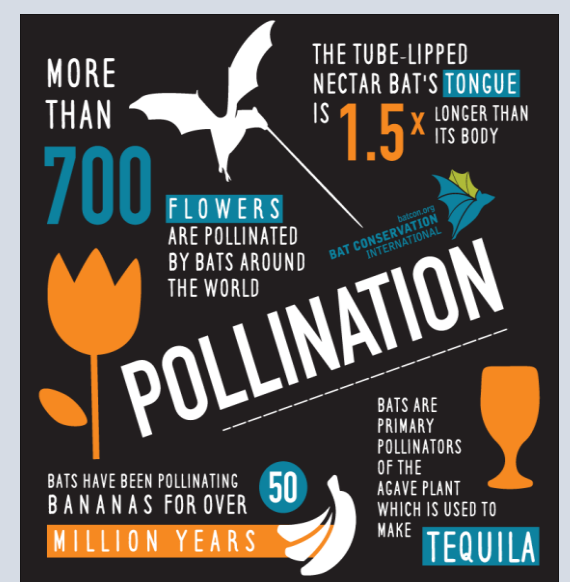
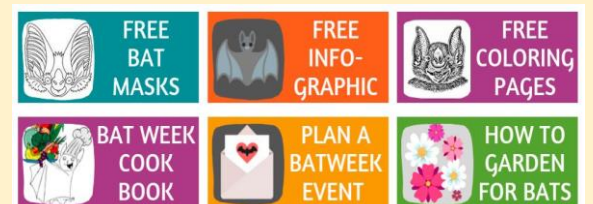
\*Open only in select Farmland (Zone 2) counties

Continued from page 2 – Bats



**October 24 – 31: Bat Week is an annual, international celebration of the role of bats in nature!** Visit <https://batweek.org/> for more about this week-long event, learn about bats, and how you can help them!

Bat Week is an international, annual celebration designed to raise awareness about the need for bat conservation. Bats are amazing creatures that are vital to the health of our natural world and economy. Although we may not always see them, bats are hard at work all around the world each night - eating tons of insects, pollinating flowers, and spreading seeds that grow new plants and trees.



### Northwoods Journal Online

Want to read issues of the *Northwoods Journal* online? Go to [www.marinettecounty.com](http://www.marinettecounty.com) and search for 'Northwoods Journal'. We can also send you an e-mail reminder when each new issue is posted online, or you can get a copy mailed to you. Contact Anne Bartels, Information & Education Specialist at 715-732-7784 or email [abartels@marinettecounty.com](mailto:abartels@marinettecounty.com).





## Deer are Threatening American Forests. Is More Hunting the Solution?

Excerpts from: <https://grist.org/science/deer-are-threatening-american-forests-is-more-hunting-the-solution/>



Across the United States, the deer population has ballooned in recent years to an estimated 30 million. Once a rare sight, deer have become something of a pest, [spreading disease](#) and causing [fatal car accidents](#) at an increasing rate. But for many people, the biggest issue is the impact of too many deer on the forest. With fewer bears and mountain lions around to keep their numbers in check, deer can reproduce with abandon and decimate the young trees and native plants that live beneath forest canopies.



Left: Forest with healthy understory Right: Over-browsed forest with no understory ~Photos by Charles Smith

To protect these crucial habitats and carbon sinks in order to help keep climate change from spiraling further out of control, scientists say deer population density in much of the country must be drastically reduced. “For this thing to work, you have to drive the deer numbers down to a very low level,” said William McShea, a wildlife ecologist at the Smithsonian Conservation Ecology Center. “You can’t just have casual hunting.”

But with an aging population of hunters, only 41 percent of whom will shoot even one deer in a given season, it’s unlikely that recreational hunting as we know it could do the trick. That means the field is wide open for a shift in wildlife management.

The deer population in the United States has been exploding since the 1940s, a few generations after [conservation-minded sportsmen](#) began pushing the government to establish wildlife preserves and put major restrictions on hunting. Commercial hunting was made all but illegal, and over time, recreational limits were set depending on factors such as the time of year and sex of animal (there are often more restrictions on hunting females). The goal was to repopulate the deer, whose numbers had plummeted from a pre-settlement count of between [24 and 62 million](#) to an estimated 300,000.

This “[North American Model of Wildlife Conservation](#),” as it came to be known, worked well — too well. As American deer populations grew, they began to have an outsize effect on their habitats. “Wherever you go, whether you are in the Northeast or out on rangelands, once you have these big herbivores in the system, they all do the same thing — they eat,” said Bernd Blossey, a professor of natural resources and the environment at Cornell University. And deer dietary preferences do not lead to equal browsing across plant species — they’re often happy to consume seedlings, saplings, native flowers, and

and other understory plants while leaving invasive brush alone. The resulting lack of biodiversity can make forests less resilient in the face of pest pressure and major climate events.

Many nature lovers say they can see deer damage just by walking in the woods. Charismatic spring ephemerals, like trilliums and Pink Lady slippers, and these other flowering understory plants — they’re gone from large swaths of the landscape. To the untrained eye, however, it might not appear that a given forest is unwell. But a [2019 study from the Journal of Applied Ecology](#) study pointed out that “seemingly healthy forests can be at long-term risk due to insufficient juveniles,” meaning young trees, to replace older ones. The authors found that over half the eastern U.S. forests were experiencing “regeneration debt” as a result of anthropogenic forces, including those associated with deer overabundance.



Under normal circumstances, when there is an opening in the forest canopy — say due to the natural death of an old growth tree or a climate disturbance, such as a storm — one or more young trees can grow large and help fill the gap. If instead those young trees are damaged or eaten, the forest will become thinner and store less carbon. According to a 2013 [Harvard University study](#), deer suppress new tree growth more than any other environmental factor. New tree growth is also crucial for the migration of tree species northward due to climate change.



A pine tree shows signs of deer damage.

These impacts aren’t just hypothetical. The intensity with which deer snuff out new tree life has major implications for the success of reforestation efforts, which the current administration points to as [a key component](#) of its plans for climate mitigation. There are specific regional consequences, too. In New Jersey, for example, a study found that a high deer presence over time was associated with as much as an 80 percent decrease in the density of seedlings and saplings. “You cannot grow a forest, or at least not a biodiverse and healthy forest, in the presence of these large deer numbers,” Blossey said.

It’s tempting to reason that because hunting restrictions brought imbalance to American

## Northern Lights Master Gardeners Hold Annual Fall Plant Sale

The first fall plant sale since 2019 happened in mid-September, and it was a hit! About 100 people attended and many plants found new homes. All proceeds go towards educational programming and improvements to facilitate horticultural learning at Harmony Arboretum & Demonstration Gardens. The Master Gardeners maintain the garden areas, and hold educational programs & events from spring through fall.



You can join as an Associate Member now too! If you want to learn and help educate the public about horticulture, you can contact the Master Gardeners to apply.

Harmony Arboretum is located 7 miles west of Marinette on Highway 64 and 1/2 mile south on County E. Watch for the sign. The public is always welcome and the visit is free. Visit NLMGA on Facebook at <https://www.facebook.com/Northern-Lights-Master-Gardeners-Association-Volunteers-NLMGA-128084290595975/> or call (715) 732-7510 for more information.

You can also learn more about Harmony Arboretum at <https://www.marinettecounty.com/departments/land-information/environmental-education/harmony-arboretum/> or <https://marinette.extension.wisc.edu/horticulture/harmony-arboretum/>.



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## Deer, continued from page 4

forests, the solution might be to simply let people kill more deer again. But that's a challenging proposition for a couple reasons: Some stakeholders are committed to a nonlethal population control strategy through the sterilization of female deer. And within the hunting community, reducing the deer population can feel like a conflict of interest.

"It's human nature that when you go out [to hunt] you want to see those animals and it's 'more is better,'" said Kip Adams, hunter and wildlife biologist at the [National Deer Association](#), a nonprofit that supports deer hunting in the spirit of wildlife conservation. In other words, for many hunters, the increased presence of deer feels like a cause for celebration rather than concern. Especially for those who have been around long enough to remember the days when the focus was to revive the population.



Even for hunters convinced that there are now too *many* deer in some places, it's not necessarily easy to participate in herd management. [Federal law](#) currently states that wild game species "cannot be sold, but can be harvested for personal consumption" or given away (with just a few exceptions). And there's only so much venison one can cram inside a home chest freezer. In some states, slaughterhouses will process deer meat for food banks, but for many hunters, that's no incentive to schlep around these carcasses, each of which can weigh about 100 pounds.

If it were up to wildlife ecologist William McShea, government officials would rethink the restrictions on selling game meat. "[Hunters] are very happy to drive deer density from 50 to 25 per square kilometer," he said, "but how do you go from 25 to 12? It's by letting people sell that deer." But as of now, there is no cohesive or concerted effort to change those policies. Another motivation could be hunting for pay. But these types of culls are typically held in high-density areas where deer are considered a nuisance to humans.

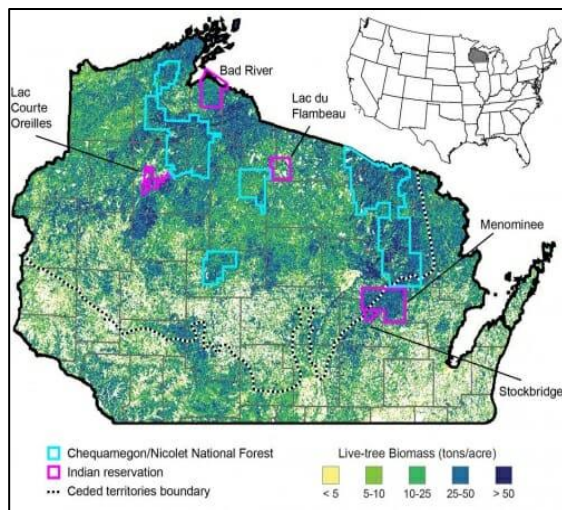
But even if the restrictions around wild game meat were lifted, forest conservation efforts would need more hunters to sign on to help reduce the deer population to a more sustainable level. According to the [National Survey of Fishing, Hunting, and Wildlife-Associated Recreation](#), 60 percent of current hunters are above the age of 45. Bringing a new generation into the mix is both a challenge and an opportunity — to add more perspective to the field.

"All of our ancestors were hunters at one point," said Lydia Parker, executive director of the nonprofit group [Hunters of Color](#) and member of the Mohawk nation. "We, as communities of color, have just been removed from that in the United States." In a survey of over 17,000 college students, a 2021 [University of Michigan study](#) found that students with previous hunting experience were most likely to be white and

male, but those with some interest were more likely to be women and people of color. That same group of "potential" hunters was more likely to face constraints due to lack of hunting knowledge and skills. That's something that Parker and her organization seek to address by making hunting more accessible and to people with limited access.

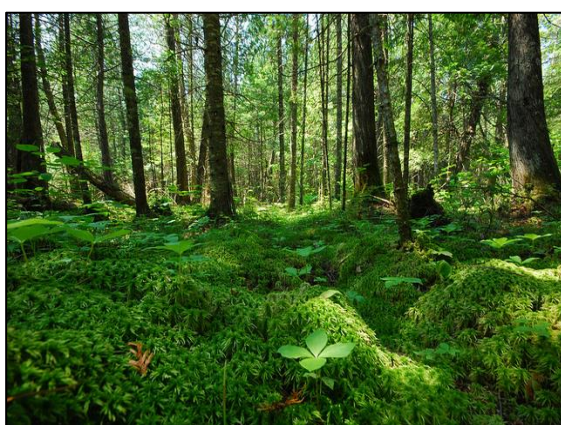
Parker believes that more hunting can be a positive thing, especially when it comes from increased diversity in the field. But for her it's also about a different approach to wildlife management. "There is no word for conservation in most of our Indigenous languages," Parker said, "because we didn't need to fix a problem like that. We didn't have overhunting or market hunting before European contact." She said that "traditional ecological knowledge was the original conservation."

A [2018 study](#) published in *Ecology and Society* compared forests managed by the Ojibwe and Menominee tribes in Wisconsin to those managed by nontribal organizations nearby. The tribal forests had lower deer densities, higher rates of tree regeneration, greater plant diversity, and fewer invasive species. The authors theorized that "flexible hunting policies based on cultural values," including hunting deer for sustenance, welcoming the presence of [predators such as wolves](#) and bears, and loosening hunting restrictions were responsible for the differences.



The research areas of the current study, with tribe-managed lands outlined in pink. The underlying map shows the density of trees in northern Wisconsin. The boundary of territories ceded to the U.S. government by the Ojibwe tribe are marked with a dotted line. From <https://news.wisc.edu/tribal-forests-in-wisconsin-are-more-diverse-sustainable/>.

A culture shift in hunting is a crucial part of restoring forests, which, if protected from browsing, could happen in as little as [11 to 20 years](#), according to one study. The same 2021 University of Michigan study that asked college students about their potential interest in hunting found that one of the two primary motivations for young people was altruism, defined as "the community benefits of hunting" such as controlling overabundant wildlife populations for the benefit of ecosystems. (The other primary motivation was obtaining game meat.)



## DNR Recommends Precautions for Hunters Handling Wild Game to Prevent Exposure to Highly Pathogenic Avian Influenza

<https://dnr.wisconsin.gov/newsroom/release/63096>



With the start of multiple waterfowl seasons and the fall bird migration ramping up, the Wisconsin Department of Natural Resources (DNR) asks hunters to follow simple precautions when harvesting and handling wild birds because of the presence of highly pathogenic avian influenza (HPAI) in the state. The current HPAI strain was first detected in Wisconsin and other midwestern states in March 2022. Recent findings of the virus in domestic and wild birds this fall illustrates that the virus is still present and circulating in the flyway, including in Wisconsin. Waterfowl are considered more susceptible to HPAI than other gamebirds, so hunters are advised to follow the precautions listed below.

### Recommended Precautions

The U.S. Fish and Wildlife Service makes the following recommendations for hunters when handling wild game to prevent possible exposure to HPAI or other potential pathogens:

- Do not handle or eat sick game.
- Field dress and prepare game outdoors or in a well-ventilated area.
- Wear rubber or disposable latex gloves while handling and cleaning game.
- When finished handling game, wash hands thoroughly with soap or disinfectant.
- Clean knives, equipment and surfaces that came in contact with game.
- Do not eat, drink or smoke while handling animals.
- All game should be thoroughly cooked to an internal temperature of 165°F before being consumed.

The DNR also asks hunters to be mindful that the virus may be transported via hunting equipment and clothing. For hunters who have backyard poultry, [basic biosecurity measures](#) are recommended.

### No Immediate Public Health Concern

According to the U.S. Centers for Disease Control and Prevention, this strain of HPAI does not present an immediate public health concern. Properly handling and cooking harvested birds to an internal temperature of 165°F kills the virus. Anyone with questions about how avian flu affects humans can find information at the [Wisconsin Department of Health Services website](#).

Anyone who observes sick or dead birds should minimize contact with them. Do not touch dead birds or wildlife with your bare hands. If you have to touch a dead bird, wear gloves or use a plastic bag to put it in the garbage. Wash your hands with soap and water after handling and throw away any gloves.

### Updates Will Be Listed on The DNR Website

More information on Avian influenza viruses, the current situation and recommended protocols for suspected cases can be found on the DNR website's [wildlife diseases webpage](#) under the avian influenza tab. The DNR will continue to update this page with future HPAI findings in wild Wisconsin birds. More information on the nationwide distribution of this HPAI virus is available on the [U.S. Geological Survey's website](#).





## Fall Garden Cleanup with Pollinators in Mind

<https://www.almanac.com/10-fall-cleanup-tips-better-spring-garden>



Don't be in a hurry to clean up every autumn leaf. While it's important to clean up plant debris, we can also spare a thought for the beneficial bugs and birds who need shelter over winter. Let's strike the right balance! Here's how to clean up the yard and garden with wildlife in mind.

### 1. Clean Up Perennial Flowers

In general, considering leaving most perennials uncut through the winter. Native bee species like small carpenter, mason, and leaf-cutter bees nest in hollow stems. Many butterflies pupate and spend the winter on these plants as well. By leaving this plant material in the landscape, we can preserve these pollinating insects for next year. There's no real need to cut back until early spring, when new growth begins to push through. If you crave tidiness, you can always leave just one area uncut.

- Many perennials such as coneflowers, sedums, black-eyed Susan, Joe-Pye weed, and marigolds can be an important food source for seed eating birds, like finches, during the winter. Allow their seed heads to ripen until they turn brown and split open. These seed capsules are like salt shakers full of tiny seeds. They'll self-sow to create more native flowers!
- On the other hand, there are some plants that should be cut back to avoid issues. Such plants as peonies, bearded iris, and lilies can be cut back to a height of 3 to 5 inches. Iris borers overwinter in/on the foliage, so removing it in the fall is a good idea. [Learn which perennials to leave and which to cut back.](#)

Of course, remove **any diseased plants** at once. This removes overwintering fungi and insects that can attack plants in the spring.



The center of this broken flower stem is plugged with neatly cut pieces of leaf, a sure sign that a leafcutter bee has created her nest down the hollow center of the stem.

### 2. Clear Away Old Crops

It's important to clear away diseased plants and any dead or rotting plant material. Pest insects, like squash bugs, and diseases will overwinter, which serves as a haven for diseases, bridging the gap between this year's crops and the next. Cover the ground with an organic mulch to protect it from winter weather or plant a cover crop.

For fruit trees and berry bushes, we prefer to delay mulching until the end of winter. This means that once all of the leftover leaves are raked up, frost will have a clear run, penetrating down into the top layers of soil and cleansing it

of overwintering pests lurking there. Take this opportunity to remove canes and other plant supports. Wipe or wash off any soil, leave them to dry off then store them inside or somewhere at least sheltered from the worst of the weather.



Pollinators need year-round habitat, not only flowers. Let your neighbors know the "mess" is intentional by posting a pollinator or wildlife habitat sign.

Take this opportunity to remove canes and other plant supports. Wipe or wash off any soil, leave them to dry off then store them inside or somewhere at least sheltered from the worst of the weather. Also, weed! You may have thought that weeding was over, but experienced gardeners know that fall is the most important time for weeding—even if frost has killed your flowers and veggies. Winter annual weeds like henbit, common chickweed, and shepherd's purse will germinate in the fall and resume growth in spring. Managing them in the fall is how you prevent weed problems in the spring!

### 3. Use Leaves Wisely

We rake, mow, and leaf blow away every leaf and bit of nature. But fallen leaves provide invaluable habitats for overwintering pollinators. Butterflies will overwinter in a chrysalis hanging from a dead plant, [native bees](#) will "hibernate" in the hollow stem of a bee balm plant, birds will flit around spent sunflowers, and caterpillars will roll into the seedpod of a milkweed plant. Frogs and other wildlife also need fall leaves for insulation the way we need a winter coat. Having a layer of leaves can help protect spring peepers and may make a difference in their ability to survive.

THIS AUTUMN,  
LEAVE STANDING DRIED STEMS  
AND SEEDHEADS FOR THE BIRDS!  
DON'T 'CLEAN UP'



[pollinator friendly yards on facebook](#)

Don't just bag up all your leaves to be taken away. If you can, leave a few out-of-the-way leaf piles, perhaps in the corner of your yard or under shrubs. Leave the leaves whole; do not shred. Leaves in your lawn can be mowed over and mulched into your turf. This will help return nutrients back into the soil and build organic matter. Don't let the leaves build up too much if you go this route, or they may not work their way down through the turf. You may need to mow several times if you have a lot of leaves on your lawn. Add some of the shredded or whole leaves to your garden beds or other areas of your property where they can serve as a mulch and break down over time. Definitely do take the time to fish out leaves that have landed in ponds. If they sink to the bottom and rot, they will reduce water quality, with a knock-on impact on wildlife. Pumps and fountains should be removed, cleaned and drained before storing.

### 4. Compost Leaves (If You Aren't Already)

Speaking of dead leaves, fall is the best time to start a compost pile. Why? You're cutting down dead foliage, weeding, and shredding leaves, which all combine to make free, nutrient-rich fertilizer for the spring. For faster composting, layer your "brown" leaves with "green" materials in order to mix both high-carbon and high-nitrogen materials. Keep the pile slightly moist and turn it occasionally to aerate and mix the material.



### 5. Leave Grass Long

Just as we leave some perennials longer, you're best leaving grass to grow a little longer over the winter. Soil-enriching caterpillars and other bugs bury right down into the thatch; a close-cropped lawn doesn't do them any favors. For this reason, set your mower blades high for the final cut of the season. This will help to protect the soil and make your turf healthier, too. You can also take the opportunity to give your lawns a neat, crisp finish. Also, if you mow your lawn, use a shredding mower, as it's healthier to return that leaf litter to the soil.

### 6. Plant Wildlife-Friendly Shrubs

Fall is a good time to plant new wildlife-friendly hedges. Include berry-producing species like hawthorn or shrubs like pussy willow that will support butterflies. [See the best shrubs for the birds.](#)

### 7. Plant Bulbs for Pollinators

Autumn is also the ideal time to plant spring-flowering bulbs to provide early nectar for pollinators like bees. Daffodils, crocuses, grape hyacinths and the stunning snake's-head fritillary are a few good choices. Plant by late October into early November. Bulbs are best planted in groups or beds of the same color, but you can also scatter bulbs across your perennial beds for pops of color in early spring. If deer are a problem in your area, avoid tulips. Stick to daffodils and allium and crocus.

## What you can do to protect pollinators

- Plant more flowers, mostly native, so that there are nectar and pollen sources for pollinators.
- Decrease the use of insecticides and other forms of pesticides.
- Create habitat.
- Advocate for the preservation of existing pollinator habitats.
- Share what you know about protecting pollinators with friends and family.

### 8. Help Out Garden Wildlife

Finally, be proactive and do all you can to help garden wildlife. Keep bird feeders topped up. Birds particularly appreciate fatty, high-energy foods during the cold months. Establish a feeding routine, offer water, and clean feeders and bird baths regularly to maintain good hygiene. See more about [feeding garden birds in winter](#).

Also visit <https://xerces.org/blog/leave-leaves-these-invertebrates-depend-on-it> and <https://www.xerces.org/blog/moving-beyond-flowers-natural-nesting-habitat-for-bees-and-other-insects>.





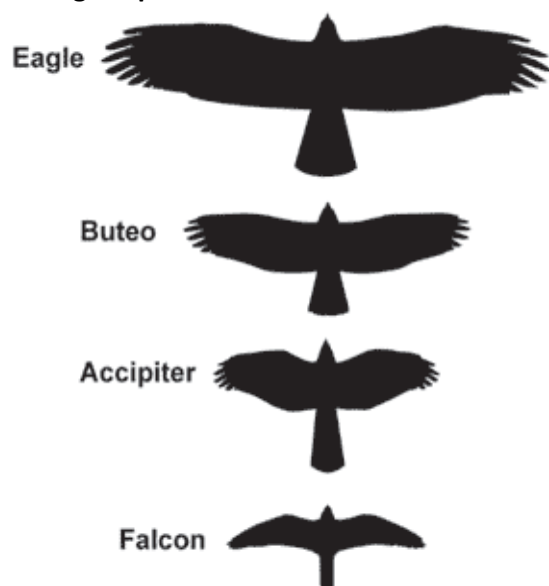
## Birding ID Tips – Hawks

[www.birdsandblooms.com/birding/hawk-id-tips/](http://www.birdsandblooms.com/birding/hawk-id-tips/)



Unfortunately for us, [birds of prey](#) don't usually strike a lovely pose like this American kestrel (above), giving us the opportunity to make an identification at eye level. You can't really rely on field marks, colors and size when you're looking at the bright sky and the birds are SO far away. Here are a few hawk identification tips:

### 1. Wing Shape



Look at the chart above to help you with hawk identification in flight. The shape of the wings can offer cues to which family your raptor is in. Accipiter wings have a rounded or pointy shape. And the buteos' wings are straight and quite broad.

### 2. Tail Shape and Length

In addition to the wings, the tail can also help with hawk identification in flight. On the chart, look how short and stubby the tail of the buteos are – like the red-tailed hawk below - compared to the longer and rounded tail of accipiters.



### 3. Wing Feathers

If you're unsure if you're looking at a falcon, look for the LACK of fringed feathers at the edge of the wings on the hawk identification chart. Eagles, buteos and accipiters have them, making the wing look almost like a hand.

### 4. Bird Shape in Flight

Having trouble deciding between the accipiters? A Cooper's hawk (top picture, next column) looks like a "flying cross" (a larger head, rounded tail) and a sharp-shinned hawk looks like a "flying capital T" (a small head).



### 5. Rump Patch

A Northern harrier bird has a very distinguishable, and commonly seen from the field, white rump patch. It's large enough that you can actually see it as the bird is flying over head. This is a good way to identify northern harriers quickly.

### Common Types of Hawks and Falcons

Many accipiters and buteos are widespread across the U.S. and are comfortable visiting backyards in search of a meal. Accipiters include the sharp-shinned hawk, Cooper's hawk and northern goshawk. Buteos include the red-tailed hawk, rough-legged hawk, broad-winged hawk and red-shouldered hawk (below).



### Eagles

Eagles are in the same classification group (Family Accipitridae) as hawks and kites. North America is home to [two species of eagles](#): bald and golden. Check out their expansive wings and their ability to soar. They're hunters and scavengers, feeding on fish, small animals and carrion. Eagles' extremely large wingspans can reach up to 7 feet or more.

### Falcons

These birds have a need for speed; some species can exceed 200 mph in flight. Falcons come in a variety of sizes - the tiny American kestrel is only 10 inches long. Be on the lookout for an extra-long hook in their [beaks](#), known as a *tomial tooth*, which is used to rip their food. Other falcons include merlins (below) and peregrine falcons.



Ospreys are classified in a different family from all other raptors. Often mistaken for bald eagles because of their size and coloring, they eat solely live fish. They dive feet-first into the water in pursuit of food, and sometimes even fully submerge themselves.

Visit <https://www.audubon.org/> and <https://www.allaboutbirds.org/news/> for more about these birds and how to identify them.

## 10 Ways to Attract and Enjoy Birds this Fall

<https://www.nwf.org/Magazines/National-Wildlife/2010/Attract-Fall-Birds>

Autumn brings dramatic changes in the bird life of any North American backyard. As many of the feathered residents that visit your yard during summer go south, migrants from regions to the north will pass through. You can make the most of this seasonal avian passage by making some adjustments to your property that will attract greater numbers of different birds in the fall & help them thrive.



### Provide running water

Most migrants that visit birdbaths with running water eat insects, including warblers, vireos, flycatchers, thrushes and thrashers. Running water can be created in a single pool birdbath by installing an electric mister or bubbler, available from bird supply stores. A small pump will move water in a multiple-tiered birdbath, causing the water to make a splashing noise as it recirculates from top to bottom.

### Leave sugar water feeders out

Don't take down sugar water feeders as soon as local hummingbirds and orioles start leaving in the fall. There are huge numbers of hummingbirds and orioles that have spent the summer farther north; as they migrate through your area, they will recharge themselves at the feeders.

### Clean out birdhouses

Early fall is a good time to clean out and make necessary repairs to birdhouses in preparation for hosting species that roost during fall and winter. The old nests usually attract insects and parasites and should be removed before winter residents move in. In many areas, bluebirds, chickadees, nuthatches and winter wrens may take up nightly residence in birdhouses to keep warm and safe.

### Create brush piles

Save your fall clippings of branches and twigs and pile them in a corner of the yard (where they will be less intrusive) to create cover for birds. Most birds that prefer habitat on the ground - such as dark-eyed juncos, tree sparrows and white-throated sparrows - will use brush piles for roosting at night and for protection from predators. Fallen evergreen trees, placed along the border of the yard, create more cover that will last throughout the winter.



### Plant evergreens

There is no better natural cover for birds in fall and winter than evergreens. Planted near feeders and birdbaths, they will attract migrants and provide cover (and thus increase the safety factor) for many birds after deciduous trees lose their leaves.

Continued next page





## Update on the Pollinator Invitation Gardens (P.I.G.) Project

By Anne Bartels, Information & Education Specialist, Land Information Department



Bumblebee on butterflyweed (a species of milkweed) at the new pollinator garden at Red Arrow Park in Marinette.

This year, the Land Information Department continued the Pollinator Invitation Gardens Project, also known as the “P.I.G. Project.” The project’s goal is to create pollinator patches for habitat throughout Marinette County and increase awareness of the importance of pollinators.

Several new pollinator patches were installed this year, mostly within the city of Marinette. The project started unofficially in 2019 with the installation of pollinator gardens at Crivitz Elementary, Wausaukee School District, Menekaunee Sunrise School and the Goodwill Possibilities Community Center in Marinette. In 2020, the project expanded due to COVID restrictions (preventing usual education programming at schools and the public). However, in 2021 and 2022, the project continued, although to a lesser extent than in 2020, as regular education programming is now almost back to pre-COVID levels.

New this year are pollinator patches at Red Arrow Park in Marinette (below, with Land Information LTE Boulton Beck) and the roundabout at Hwy. 64/180/Cty. T in Marinette (top, next column).



Some other P.I.G. gardens available for public viewing - including the schools listed above - are at the UWGB-Marquette campus (back parking area); the Marinette REC center; Inferno Fitness in Marinette; Peshtigo Middle School (near the school main entrance); and Good Shepherd Lutheran Church in Peshtigo.



Purple Prairie Clover blooming in the roundabout pollinator garden.

For more about the PIG project, visit <https://www.flickr.com/photos/194889855@N02/albums/72177720296237231>.



Above – the PIG garden at UWGB-Marquette campus; below, the garden at the Wausaukee School District.



Above, the garden at Crivitz Elementary School; below, the garden at the YMCA in Menominee.



## Birds, continued from page 8

### Increase the number of feeders

Autumn is a good time to double the number and kinds of feeders you put out for the birds. Starting with the first cool fall days, the consumption of bird food will increase and continue to increase as the average daily temperatures drop. To attract the greatest number and variety of birds, provide a variety of seed and suet feeders.



### Move the action closer

One of the main reasons for feeding birds is so that you can enjoy watching their behavior in a natural environment. If you move your bird feeders and birdbaths closer to the house, you can get close to the creatures without disturbing them. If there is not enough natural cover just outside the windows, plant some or place potted evergreens around the feeders and baths. The birds will adapt to being close to the house quickly.

### Provide foods for insect eaters

Many birds that frequent backyards will not eat seeds, but they will eat insects and fruits. Cedar waxwings, American robins, northern mockingbirds, some woodpeckers, and migrating thrushes, thrashers and tanagers will feed readily on chunks of apples, berries and jellies from containers. Bluebirds, robins, mockingbirds and some woodpeckers will eat live mealworms (available at pet supply stores) served in a tray feeder.

### Bring bird sounds indoors

With the arrival of cooler weather, people tend to close their doors and windows, blocking out the pleasant sounds of birds singing, scolding and chattering. If you like those sounds, consider installing a wireless baby monitoring device outside, and send the sounds of nature inside to a well-placed receiver.

### Protect birds against collisions

More birds collide with windows during fall than any other season of the year. Often migrating birds that are not familiar with the terrain will see the reflections of a woodland in a windowpane and fly right into it. If the reflection can be removed or muted with soap, netting, screening or by hanging streamers on the outside, the birds will veer away from it. Whatever technique you use, do it on the outside of the pane. Pulling drapes inside will enhance the reflection on the outside. Pasting silhouettes of birds of prey, such as hawks and owls, may also help deter flying birds.





## National Estuarine Research Reserve (NERR) Update

<https://gopresstimes.com/2022/09/25/green-bay-dives-into-phase-two-of-national-reserve-designationuwgb-partners-gauging-public-interest-in-site-locations/>

Momentum continues to build in the Green Bay area for the [National Estuarine Research Reserve](#) (NERR), a federal designation to help protect and study coastal wetlands and natural estuaries. The National Estuarine Research Reserve System is a network of 30 coastal sites designated to protect and study estuarine systems. Established through the Coastal Zone Management Act, the reserves represent a partnership program between NOAA and the coastal states. NOAA provides funding and national guidance, and each site is managed on a daily basis by a lead state agency or university with input from local partners.



Emily Tyner, the director of freshwater strategy at [University of Wisconsin-Green Bay](#) (UWGB), was pleased to see a large turnout, both virtually and in-person, during two public site selection meetings Sept. 7-8 at UWGB. More than 140 people attended, and Tyner was still taking submitted written comments through Sept. 15. “No one spoke against it, which was good,” Tyner said. “Most of the comments were that people wanted to see more land included in the sites being considered. We understand that as people have their favorite spots. We’ll definitely consider that going forward.”

The bay of Green Bay is the world’s largest freshwater estuary, according to UWGB. Land set aside for the reserve is designated through a six-step process that usually takes about four to six years to finish. UWGB hopes to complete the process by early 2025.

Currently in step two, the Green Bay NERR is evaluating potential site locations with plans to designate about 11,500 acres of public property along the east and west shores of Green Bay for the reserve. The NERR designation is non-regulatory, so no new federal rules are associated with the designation. “There shouldn’t be any impact on fishing and hunting lands,” Tyner said, adding that no private land will be included.



The bay of Green Bay is the world’s largest freshwater estuary. Work is underway to identify and designate about 11,500 acres of public property on both shores as a National Estuarine Research Reserve.

### A Large Footprint

Among the sites in the Green Bay area are city and county-owned lands along Duck Creek from Pamperin Park to the bay; west shore public lands including the Ken Euers Nature Area, Barkhausen Waterfowl Preserve and the Sensiba Wildlife Area including Long Tail Point; and east shore areas including Point au Sable and Wequiock Creek Natural area. To the north, potential sites stretch to Door County and Michigan, including public marshlands in Peshtigo and Sturgeon Bay.



The Green Bay NERR would be the third of its kind in the Great Lakes region, joining the Old Woman Creek NERR along the Lake Erie shoreline in Ohio, and the Lake Superior NERR in Duluth-Superior.

Patrick Robinson, the UW-Madison Division of Extension dean for agriculture, natural resources and community development, worked on establishing the Lake Superior reserve, formally designated in 2010. For the past several years, Robinson has been involved in the Green Bay project, serving on the Site Coordination Committee. “(The bay of) Green Bay is a tremendous asset for the surrounding communities and important to the region’s quality of life,” Robinson said in an email. “A designation would result in additional funding for new employees, research and education, a visitor center, water quality monitoring and more.”



Green Bay West Shores Wildlife Area

### An Organizing Force

NERR was created through the federal Coastal Zone Management Act, a partnership through the National Oceanic and Atmospheric Association (NOAA) and several coastal states with a mission to “practice and promote stewardship of coasts and estuaries through innovative research, education, and training using a place-based system of protected areas.”

Funding for the project comes through state and federal money. While the NOAA provides direction nationally, regionally universities or state agencies lead the project’s day-to-day guidance. “One goal we have with NERR is it can be an organizing force to think about what the future is for water in our region, making sure the fish are healthy and people can swim, boat and recreate in these waters,” Tyner said.

UW-Green Bay is working with several wetland restoration organizations, including Ducks Unlimited-Wisconsin, to plan and build the reserve in hopes of protecting the Green Bay ecosystem for decades to come.

Climate change continues to erode the nation’s coastlines, and the damaging effects are showing along Lake Michigan coastal areas. “Green Bay is taking an approach that’s a little above and beyond what the other NERRs do in that we look to continue some of the work they’re doing and really get into some of the applied science part of delivering coastal wetland conservation, especially in an important area like Green Bay,” Brian Glenzinski, regional biologist, Ducks Unlimited – Wisconsin, said. “Working with

UWGB and the NERR should help us deliver better conservation in the long run.”

### National Visitor Center

The NERR designation includes funds for construction of a visitor center somewhere in the area, which stretches as far north as Marinette and the islands off the tip of Door County. “Per guidance by NOAA and our own guidance, we certainly don’t want to identify a location for a visitor center until we have the boundaries for the natural areas,” Tyner said. Since the project uses federal and state funds, budget constraints limit the size of the reserve. Tyner said the Green Bay reserve aims to be the 33rd or 32nd largest NERR in the U.S.

One of the program’s key goals is to teach K-12 students the importance of natural waterways, how erosion can hurt the ecosystem and ways to safeguard local coastlines from additional damage. “The program is not only for all of Northeast Wisconsin, but is designed to serve all of the Lake Michigan-Lake Huron shoreline,” Tyner said. “That means access to teaching resources and schools or working with non-profit groups and communities along the lakeshore that’s not bound by the reserve. The idea is to serve a lot of people.”



Students at the Lake Superior NERR

Having seen the Lake Superior NERR develop from an idea to reality, Robinson knows how much collaboration is needed to make the Green Bay NERR successful. “The most challenging and rewarding aspects are completing the intentional work of building and strengthening collaborations and subsequently completing the work within the project timeline,” Robinson said. The years of planning, securing funds and long hours spent developing the NERR will be worth it, Robinson said. “I truly believe this is a fantastic opportunity that will pay dividends for the residents and communities of the region for decades to come.”

### A Group Effort

For Ducks Unlimited, the opportunity to expand work it was already doing to restore the Green Bay wetlands with help from UWGB and NOAA was a no-brainer, Glenzinski said. “Science has pointed us to this place because it is a special place,” he said. “It once supported huge amounts of waterfowl. We’ve got the challenges from habitat degradation from years of abuse on the Fox River and elsewhere in that area that have impacted what was a very productive area, but that also gives us a ton of potential to work with and restore those habitats that were lost.” With support from the Wisconsin DNR and U.S. Fish and Wildlife Service, other groups realized the benefits of building a reserve, including Green Bay Duck Hunters and the Northeast Wisconsin Land Trust. “There’s a bunch of partners in the conservation community that will really benefit from the NERR and it will really be an awesome opportunity to pull the NERR into an impressive program that’s already working up there.”

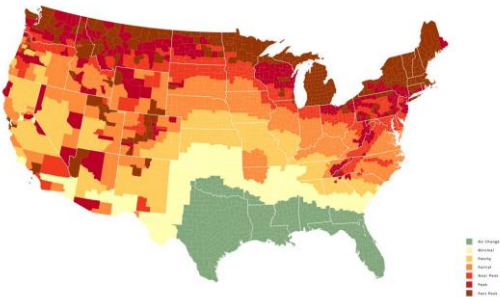




Fall Foliage Prediction Map

<https://smokymountains.com/fall-foliage-map/>

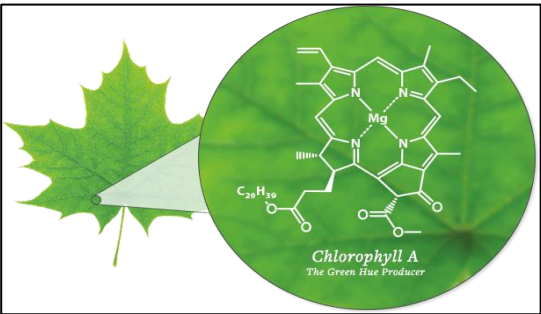
The 2022 Fall Foliage Map is the ultimate visual planning guide to the annual progressive changing of the leaves. While no tool can be 100% accurate, this tool is meant to help travelers better time their trips to have the best opportunity of catching peak color each year.



Use the slider tool below the map on the website to see when the fall colors will change in your area. According to the tool, Marinette County will be near peak fall colors around October 17<sup>th</sup>. You can also visit the Travel Wisconsin fall color map at <https://www.travelwisconsin.com/fall-color-report>.

Why Do Autumn Leaves Change Their Color?

It all starts with photosynthesis. Leaves typically produce their vivid hues of green from spring through summer into early fall through the constant creation of Chlorophyll. As we all learned in 5th grade science, Chlorophyll is the key component in a plant's ability to turn sunlight into glucose, which in turn feeds the trees. Many millions of these Chlorophyll cells saturate the leaves, ultimately making them appear green to the eye.



Without the presence of Chlorophyll in the leaf, the bright golds, reds, yellows, and browns would be the natural colors seen year-round.

The Changing Colors

Chlorophyll is not the only player in the fall leaf-color game. Present in other leaves and trees are the compounds known as Carotenoids and Anthocyanins. As the Fall days begin to get shorter and shorter, the production of Chlorophyll slows to a halt, eventually giving way to the 'true' color of the leaf.

Yellows



Flavonols

Flavonols, a part of the flavonoid family, are always present in leaves, and also contribute to the yellow color of egg yolks. While always present in leaves, it's not seen until the production of Chlorophyll stops and Chlorophyll is broken down into other compounds.

Why do Leaves Fall?

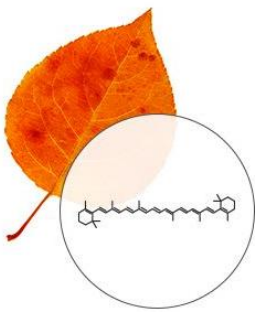
The beauty of nature is sometimes found in the profound 'intelligence' it exudes. Perennials, which includes trees, must protect themselves in order to get through the harsh, freezing



temperatures of winter. If trees did not shed their leaves, their soft vegetation would certainly freeze during winter time, damaging and, no doubt, killing the tree.

In order to cope with the grueling winter temperatures, trees slowly close off the veins that carry water and nutrients to and from the leaves with a layer of new cells that form at the base of the leaf stem, protecting the limbs and body of the tree. Once the process of new cell creation is complete, water and nutrients no longer flow to and fro from the leaf - this enables the leaf to die and weaken at the stem, eventually falling gracefully to the ground.

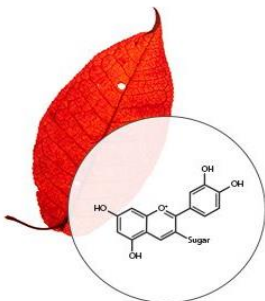
Oranges



Beta-Carotene

Beta-Carotene is one of the most common carotenoids present in most leaves. Strongly absorbing blue and green light, it reflects yellow and red light from the sun, giving leaves their orange hue.

Reds



Anthocyanins

Unlike the carotenoids, anthocyanin production increases dramatically with autumn. This protects the leaf, prolonging its life on the tree through the Autumn season, and also provides the beautiful red color to the leaf.

What happens to the fallen leaves?

Earth, among other things, is fantastic at recycling. Whether through the water cycle, or the slow process of decomposing plants and trees back in to rich soil, the Earth wastes very little.

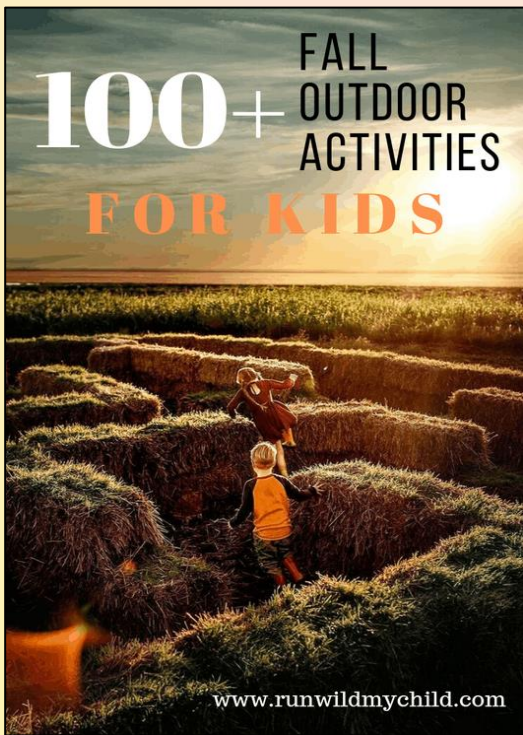
When leaves fall to the ground, they begin to break down and eventually create a rich humus on the forest floor that absorbs dew and rainfall. This nutrient-rich 'sponge' acts as a continual source of nutrients and water for trees and plants, helping to promote life and plant health in the next spring season.

It is not difficult to conclude that while the falling of the leaves protects the trees through winter, it's likely that trees would not survive as well without the rich layer of dead leaves through the warm spring and summer months. In this way, trees' natural cycle provides health and sustainability for itself year after year.



100+ Fall Outdoor Activities for Kids

<https://runwildmychild.com/fall-outdoor-activities-for-kids/>



As the weather cools down and the leaves put on a show, it's the perfect time to get those kids outside. It may feel a bit harder to spend time outdoors with school, holidays, and fall busyness, but it's more important than ever to make sure your child gets plenty of fresh air, exercise, sunshine, and Vitamin N (nature). To help, we've put together this giant comprehensive list of 100+ fall outdoor activities for kids! The items, activities, acts of service, treats, experiments, and crafts on this list are guaranteed to get you outside and active, creating and exploring.





## Why Spiders are Important!

<https://www.earthkind.com/blog/spiders-important-whats-purpose/>



Arachnophobia (the fear of spiders) is the 3rd most common of all phobias in America. Considering that there are at least 4,000 known species of spiders living in the United States, it's not hard to see why so many people get upset about finding these pests in their homes. Understanding the purpose of spiders and the role they play in our ecosystem can help ease some nerves and make them less scary. Find out more below!

### What Do Spiders Do?

There are many benefits of spiders. First and foremost, spiders eat insects. They are important predators. Maybe you've noticed a web by the light outside your front door – consider all the annoying moths, flies, and mosquitoes that have been prevented from entering your home because of a helpful arachnid! Though some spiders may make their way into your home, they will eat other insects that may be inside as well.



While the details can seem a little gruesome if you think about an unsuspecting insect being caught in a sticky cobweb and consumed by an eight-legged arachnid, the fact is that spiders keep the numbers of other pests under control. A few positive results this leads to includes:

- Fewer pests destroying crops
- Less disease being spread by insects
- Fewer bloodsucking insects stinging, biting, and bothering humans.

Those are things we can all appreciate. Another interesting, and lesser known fact, is the benefits they are providing for medical research and product development. [Spider venom](#) has the potential to act as a safer painkiller and may be able to treat strokes, muscular dystrophy, and of course, is used for antivenom in cases of harmful spider bites.

### Why Are Spiders Important?

These pests play an important role in our ecosystem as predators to other insects. Determining the importance of spiders depends on who you ask. A gardener or farmer is likely to recognize how helpful they are at preventing pests from destroying crops. A doctor, scientist, or engineer may appreciate the innovative possibilities related to the study of spiders. However, the average homeowner would likely argue that spiders don't belong anywhere near them because they are gross, creepy, and scary!

Being scared of them is a normal response, and there are a few types of [dangerous spiders](#), including the black widows and brown recluses. However, most species generally prefer to avoid contact with people. Even in instances of [spider bites](#), healthy adults can usually survive without serious consequences.

Just because you don't want to see any inside your home doesn't mean they don't serve an important purpose. Keeping spiders outside where they belong is the best way to keep everyone safe, happy, and healthy.



### A Few More Fun Facts

Here are a few other interesting facts about spiders:

- They have either six or eight eyes depending on the species.
- Despite having so many eyes, many spider species have poor eyesight. They make up for it with the tiny hairs that line their eight legs. The hairs are able to detect scents, helping them find food and potential mates.



- Spiders are found on every continent, except Antarctica.
- All spiders produce silk, but not all of them spin webs. The silk they use to spin webs is one of the strongest materials ever discovered. It may not seem like much when you're swatting it away with your hands, but the tensile strength of [spider silk](#) is comparable to high-grade alloy steel.
- Some spiders are actually kind of cute!



- Their leg hair is also designed to sense vibrations, such as when prey lands on their web. This is one reason why they don't like areas with a lot of action or noise.

- Trapdoor spiders have been documented to live up to 35 years in the wild!
- The Goliath Bird Eating Tarantula is the largest spider in the world, which can reach up to one foot long in body length and have fangs that are a full inch long! Don't worry, its natural habitat is in the rainforests of South America.

### Keep Them Away from Your Home

Even though we know spiders do serve a purpose and are good for the ecosystem, most homeowners still don't like the idea of sharing their space with them. Getting rid of spiders is a common request, but finding a safe and effective method of pest control is crucial. The first thing you can do is keep a clean home, clear of clutter and debris. They prefer to hide in sheltered, undisturbed areas such as behind an old bookshelf, in a rarely used closet, or down in a dark, dusty basement.

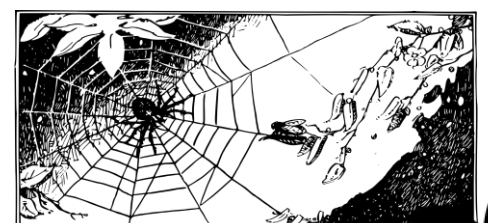
Next, make sure you maintain a pest-free home. They won't live somewhere without an adequate food source, so keeping other household pest problems under control will also control spiders. Don't neglect repairing any damaged window screens, weather-stripping around doors, and any other small gaps or openings around your home that they might use to get inside.

Finally, consider using a [botanical pest repellent](#) that prevents these pests from creating their home inside your home. Learn more about the [habitat of a spider](#) so you can better understand how they get into your home, and other ways to keep them out.



For more about spiders and their habitats, visit:

- ✦ <https://hort.extension.wisc.edu/articles/garden-spiders/>
- ✦ <https://learningstore.extension.wisc.edu/products/common-spiders-in-and-around-homes-p295>
- ✦ <https://bugguide.net/node/view/1954>
- ✦ <https://madisonherps.org/kickstart/en/wisconsin-reptile-resources/education-articles/161-spiders-and-how-to-stand-them>
- ✦ <https://uwm.edu/field-station/jumping-spider/>





# MMM! Fall Vegetable Season is Here

<https://hort.extension.wisc.edu/articles/fall-vegetables/>



Fall vegetables are hearty, colorful vegetables, perfect for enjoying with the cooler temperatures and changing colors of fall. Many fall vegetables are popular for their unique flavors, and some fall vegetables can be stored for months.

**Brussels sprouts** originated in Belgium and are named after the country's capital city. They are similar to cabbage in shape and taste but have a milder flavor. Brussels sprouts are available from September through November in Wisconsin. Select sprouts that are bright green in color and uniform in size (to allow for even cooking). Small, firm, compact sprouts are the best choice.

Do not wash or trim before refrigerating. Store in a perforated plastic bag for up to a week. Before cooking, remove the bottom portion of the stem and the outermost leaves. Steam or boil the sprouts for 5–10 minutes. Toss cooked sprouts with olive oil, lemon juice, or butter. Marinate cooked sprouts in salad dressing overnight and use in salads.



## Roasted brussels sprouts

**1½ lbs. brussels sprouts**  
**3 tbsp. olive oil**  
**1 tsp. kosher salt**  
**½ tsp. freshly ground black pepper**

Preheat oven to 400°F. Place trimmed brussels sprouts, olive oil, kosher salt, and pepper in a large resealable plastic bag. Seal tightly, and shake to coat. Pour onto a baking sheet, and place on center oven rack.

Roast for 30–45 minutes, shaking pan every 5–7 minutes for even browning. Reduce heat if necessary to prevent burning. Serve immediately.



—allrecipes.com

**Beets** are garden plants related to Swiss chard, and both their roots and leaves are edible. Most of the beets grown in Wisconsin are red, but you can also find pink, purple, white, and yellow varieties. In Wisconsin, beets are available from June through November. Choose beets that are firm, not shriveled or soft. Beet leaves should be dark green. Wrap beets in a damp cloth and store them in the refrigerator. Do not wash

them before storing. Don't cut or peel beets before cooking. Instead, scrub the skin gently with a vegetable brush, and cut and peel them after they are cooked. Grate the root and use it in salads. Add raw beet greens to mixed salads, or stir-fry them.

**Winter squash** are members of the cucurbit family, along with cucumbers, melons, pumpkins, and summer squash. They are hard-skinned and come in a variety of sizes, shapes, colors, and textures. Despite their differences in appearance, many winter squash varieties are interchangeable in recipes. These types of squash are popular in the United States because they are excellent winter vegetables. They are available from September through November and can be stored into the winter.

Select winter squash that are firm, free from cracks, and still have stems attached. Winter squash can be stored at room temperature for up to a month. Place in a cool location for long-term storage. Wash squash before using. If a recipe calls for peeled chunks, cut the squash first and then remove the peel, as some varieties can have very tough skin. Add to soups and stews. Mash cooked squash and serve with butter.



## Butternut squash pie

**1½ c. butternut squash**  
**1 c. lightly packed brown sugar**  
**1 tbsp. cornstarch**  
**1 egg, beaten**  
**1 c. evaporated milk**  
**1 tsp. ground cinnamon**  
**½ tsp. ground ginger**  
**½ tsp. ground nutmeg**  
**1 9-inch unbaked pie shell**

Cut butternut squash lengthwise, remove seeds, and roast cut-side up at 400°F for 1–2 hours, or until squash skin is blistered and flesh is soft. Let squash cool and scrape from skin. Preheat oven to 350°F. In a blender or food processor, combine squash, brown sugar, cornstarch, egg, milk, cinnamon, ginger, and nutmeg. Process until smooth. Pour into the unbaked pie shell. Bake for 50 minutes or until a table knife comes out clean when inserted in the center.

—Kristin Krokowski

- <https://www.thespruceeats.com/complete-fall-vegetables-2217200>
- [https://datcp.wi.gov/Documents/mk\\_fc\\_81web.pdf](https://datcp.wi.gov/Documents/mk_fc_81web.pdf)

## Environmental Field Days for County's 4<sup>th</sup> Graders Held in late September

Every year the Marinette County Land & Water Conservation Division of the Land Information Department holds an annual education event for 4<sup>th</sup> graders – Environmental Field Days. Students rotate through several stations and learn about various topics like forestry, wildfire control, insects, soil health, mammals, fish, composting, invasive species, conservation jobs, and more. *This year, 435 students and 33 adults attended!*

There are four sites throughout the county – City Park in Marinette, Badger Park in Peshtigo, Lake Noquebay Park near Crivitz, and a site on county land in Dunbar. Teachers receive quiz questions from each station to review the information with students later in the classroom. EFD is a fun-filled event for students and adults alike!



Marinette City Forester Vince Kambitsis shows students tools he uses in his job



WDNR Conservation Warden Tim Werner discusses wildlife with students



WDNR Fisheries Biologist Tammie Paoli shows fish species from the Menominee River



Tyler Norris and Katherine Mentel of the Wild Rivers Invasive Species Coalition (WRISC) show students how to avoid spreading invasive plants



Sheri Denowski, County Conservationist, has students look at soil samples to find soil-dwelling critters





## October Meteor Showers – Where & When to Look!

<https://earthsky.org/astronomy-essentials/earthskys-meteor-shower-guide/>,  
<https://www.amsmeteors.org/meteor-showers/meteor-shower-calendar>,  
<https://stardate.org/nightsky/meteors>

### What is a meteor shower?

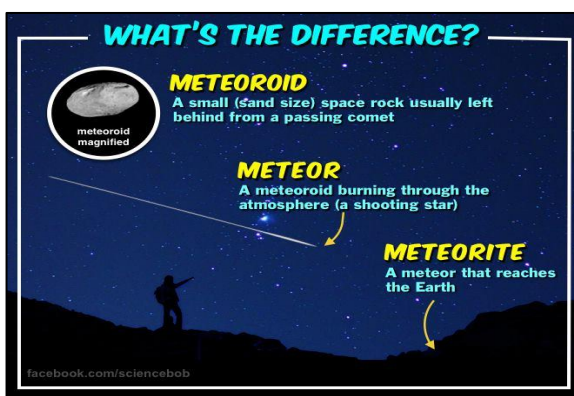
A meteor shower is a spike in the number of meteors or "shooting stars" that streak through the night sky. Most meteor showers are spawned by comets. As a comet orbits the Sun it sheds an icy, dusty debris stream along its orbit. If Earth travels through this stream, we will see a meteor shower. Although the meteors can appear anywhere in the sky, if you trace their paths, the meteors in each shower appear to "rain" into the sky from the same region.



Meteor showers are named for the constellation that coincides with this region in the sky, a spot known as the radiant. For instance, the radiant for the Leonid meteor shower is in the constellation Leo. The Perseid meteor shower is so named because meteors appear to fall from a point in the constellation Perseus.

### What are shooting stars?

"Shooting stars" and "falling stars" are both names that describe meteors - streaks of light across the night sky caused by small bits of interplanetary rock and debris called meteoroids vaporizing high in Earth's upper atmosphere. Traveling at tens of thousands of miles an hour, meteoroids quickly ignite from the searing friction with the atmosphere, 30 to 80 miles above the ground. Almost all are destroyed in this process; the rare few that survive and hit the ground are known as meteorites.



When a meteor appears, it seems to "shoot" quickly across the sky, and its small size and intense brightness might make you think it is a star. If you're lucky enough to spot a meteorite (a meteor that makes it all the way to the ground), and see where it hits, it's easy to think you just saw a star "fall."

### Early October meteors ... the Draconids

**Predicted peak:** is [predicted\\*](#) for October 9, 2022, at [1 UTC](#) (evening of October 8 for the Americas). There's no dark window for watching the [Draconids](#) in 2022. If you want to watch in moonlight, try October 8.

**Overall duration of shower:** October 8-9.

**Radiant:** Highest in the sky in the evening hours (see picture at top of next column).



**Nearest moon phase:** Full moon is 20:55 UTC on October 9. In 2022, the full or nearly full moon will drown most Draconid meteors from view.

**Expected meteors at peak, under ideal conditions:** Under a [dark sky](#) with no moon, you might catch 10 Draconid meteors per hour.

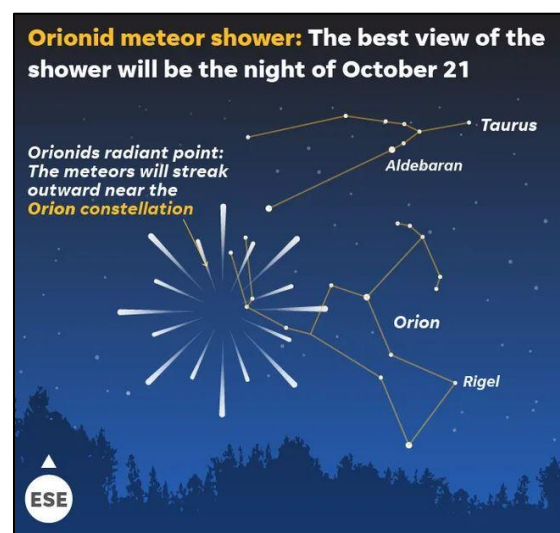
**Note:** The Draconid shower is a real oddity, in that the radiant point stands highest in the sky as darkness falls. That means that, unlike many meteor showers, more Draconids are likely to fly in the evening hours than in the morning hours after midnight. This shower is usually a sleeper, producing only a handful of languid meteors per hour in most years. But watch out if the Dragon awakes! In rare instances, fiery Draco has been known to spew forth many hundreds of meteors in a single hour. That possibility keeps many skywatchers outside – even in moonlight – during this shower.

### Late October meteors ... the Orionids

**Predicted peak:** is [predicted\\*](#) for October 21, 2022, at [18 UTC](#). Watch for Orionid meteors on both October 20 and 21, in the wee hours after midnight and before dawn.

**Overall duration of shower:** Sept. 26 -Nov. 22.

**Radiant:** The radiant rises before midnight and is highest in the sky around 2 a.m.



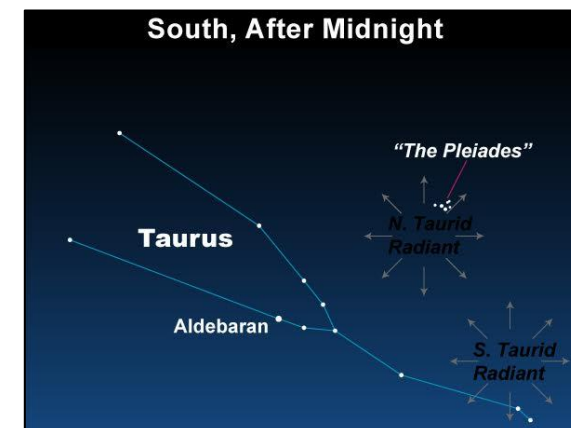
**Nearest moon phase:** New moon falls at 10:49 UTC on October 25. So, at the Orionids' peak, the moon will be in a [waning crescent](#) phase and rise in the early morning hours. It'll be up there, but not too bright. You might even enjoy the waning crescent as you watch for the Orionids in 2022.

**Expected meteors at peak, under ideal conditions:** Under a [dark sky](#) with no moon, the Orionids exhibit a maximum of about 10 to 20 meteors per hour.

**Note:** These fast-moving meteors occasionally leave persistent trains. The Orionids sometimes produce bright fireballs.

The Orionid meteors are debris left behind by Comet Halley, arguably the most famous of all comets, which last visited Earth in 1986. This comet leaves debris in its wake that strikes Earth's atmosphere most fully around October 20-22, while Earth intersects the comet's orbit, as it does every year at this time. Particles shed by the comet slam into our upper atmosphere, where they vaporize at some 60 miles (100 km) above Earth's surface. If you trace these meteors backward, they seem to radiate from the Club of the famous constellation Orion the Hunter. Halley's comet will be visible again in 2061. For more information, visit <https://solarsystem.nasa.gov/asteroids-comets-and-meteors/comets/1p-halley/in-depth/>.

### October into early November ... the South and North Taurids



**Predicted peak:** The South Taurids' [predicted\\*](#) peak is November 5, 2022, at [18 UTC](#). The North Taurids' [predicted\\*](#) peak is November 12, 2022, at 18 UTC. But the South and North Taurids don't have very definite peaks. They ramble along in October and November and are especially noticeable from late October into early November, when they overlap. Best to watch around midnight, and probably best from late October into early November.

**Overall duration of shower:** The South Taurids run from about September 23 to November 12. North Taurids are active from about October 13 to December 2.

**Radiant:** Rises in early evening, highest in the sky around midnight. See chart below.

**Nearest moon phase:** In 2022, new moon falls on October 25. Full moon is November 8. So late October – when the two showers overlap and there's no moon – might be excellent for the Taurids in 2022. But you'll catch Taurid meteors throughout October and November. Under dark skies with no moon, both the South and North Taurid meteor showers produce about 5 meteors per hour (10 total when they overlap). In 2022, watch for fireballs.

**Note:** [Taurid](#) meteors tend to be slow-moving but sometimes very bright. The showers sometimes produce fireballs, which might make their cyclical reappearance in 2022. The American Meteor Society pointed to "a seven-year [periodicity](#)" with Taurid fireballs. 2008 and 2015 both produced them. [Photos and video of Taurid fireballs here](#). Watch for them in 2022!





OCTOBER | 2022

# OUTDOOR ALMANAC

1

With its molt nearly complete, the **American Goldfinch** has only a few remaining yellow breeding feathers. Its new wing feathers sport broad, pale edges and wing bars that, by next August, will be worn away almost completely, leaving an all-black wing.



2

Bumble Bees are foraging on asters and goldenrods. The bright orangey yellow pollen of these late-blooming flowers makes their pollen baskets almost glow.

3

Red-bellied Woodpeckers and Blue Jays can both be seen gathering acorns to eat now and also to cache for the winter.

5

If you come across puffball mushrooms that look a little collapsed, give them a gentle poke with your finger or a stick. You may be rewarded with a puff of spores.

8

Tonight is the peak of the **Draconid meteor shower**, where meteors plummet from a comet called Giacobini-Zinner.



9

Full moon.



13

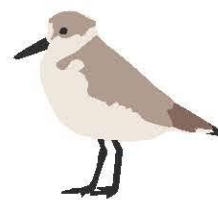
Look closely at rotting logs to see the tiny fruiting bodies of wolf's milk slime mold, which are bright pink to purplish gray. Slime molds are not fungi but single-celled organisms that feed on fungi, bacteria, and other microorganisms.

15

Northern Saw-whet Owls migrate through for the next few weeks. Look in cedar trees or dense thickets for roosting owls during the day and listen for their hoot, which sounds like a backing truck's safety beeps.

18

Most shorebirds have already migrated but it's still possible to find Semi-palmated Plovers, **Semi-palmated Sandpipers**, and Greater Yellowlegs resting on their way south. During migration, they can be found inland as well as along the coast.



19

Ruby-crowned and Golden-crowned kinglets are migrating from northern forests to their wintering areas. Tiny and fast moving, the crowns for which they are named are often hidden.

20

**Eastern Chipmunks**

are busy storing nuts and seeds for winter. Instead of hibernating continuously through winter, chipmunks are sleepers, waking every few weeks to eat the food they stored.



23

Black Racers migrate from the field habitats they live in most of the year to forested slopes to overwinter in dens with other snakes.

26

Look for Harlequin Ducks and Common Goldeneyes arriving to spend the winter along the coast.

31

**Happy Halloween!** Don't worry about any vampire bats in Massachusetts. Species that we do have, like Large Brown Bats and Eastern Red Bats, are preparing for hibernation in caves and cavities or traveling south.


[massaudubon.org](http://massaudubon.org)


lizclimo.tumblr.com

Leaves provide shelter for all kinds of critters. Leave the leaves.



Ladybugs help control aphids and other pests.



To protect ladybugs, leave some fallen leaves in garden beds. Avoid leaf blowers and pesticides.

